REMARKS/ARGUMENTS

Claims 1-28 are currently pending.

Claims 1, 5, and 24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 7,068,630 (San Filippo) in view of U.S. Patent Application Publication No. 2003/0126246 (Blouin et al.).

San Filippo is directed to a method for measuring load between MCDN devices for use in determining the path with optimal throughput. A local node measures its own load and communicates its load to its neighboring nodes, which communicate their loads to the local node. The portion of load attributed by each node to the total load on a link between nodes is subtracted from the load value to obtain a measurement. As noted by the Examiner, San Filippo does not derive a traffic flow model for a modified scenario using a plurality of constraints describing the interdependency of an initial to a modified scenario or calculate values or upper and lower bounds of traffic values for the modified scenario from the traffic flow model using the input data.

Blouin et al. describe a system and method for network control and provisioning. The system performs a routing function, resource allocation, configures network resources to satisfy resource allocation requirements, and calculates network provisioning requirements.

In rejecting the claims, the Examiner refers to Fig. 1 and lines 1-14 of paragraph [0008] of Blouin et al. Fig. 1 illustrates a functional representation of a multi-stratum multi-timescale network control. Routing means (edge controller 250) operate at a first stratum on a first timescale. Resource allocation means (core controller 260) operate at a second stratum on a second timescale, and provisioning means (network controller 270) operate at a third stratum on a third timescale (see Figs. 1 and 2). The lower stratum network function provides network information to the higher stratum network function which makes control decisions based on the network information. The network is initially provisioned based on an estimated aggregate traffic demand for each pair of edge nodes.

The core controllers may make corrections to resource allocations which are utilized by the edge controllers.

The Examiner has failed to point to any teaching of deriving a traffic flow model for a modified scenario using a plurality of constraints describing the interdependency of an initial to a modified scenario or calculating values or upper and lower bounds of traffic values for a modified scenario from a traffic model using input data. In contrast to the claimed invention, Blouin et al. simply perform resource allocation, network provisioning and routing on different timescales.

Furthermore, in the Background of the Invention, Blouin et al. note that the use of both traffic models and traffic monitoring would require excessive computing time, after which relevant, current data on which to base provisioning decisions may not be easily obtained. Thus, Blouin et al. specifically teach away from the use of traffic measurements and traffic models, as set forth in the claims.

Applicant's invention is particularly advantageous in that the system can be used to calculate traffic values in a communications network for a modified scenario using measured traffic data of the initial network. By deriving constraints from the interdependency of the initial and modified network, actual traffic data can be used in the calculation for the modified scenario if they are not affected by the modifications. In this way, either exact values or relatively tight bounds can be derived for the desired traffic values in a modified network. Furthermore, the system can be used to analyze a whole set of modifications. This is useful, for example, for a resilience analysis of a communications network where a service provider might want to ensure that the network has enough capacities to deal with the failure of one or more links.

Accordingly, claim 1 is submitted as patentable over the references cited.

Claims 2-16, depending either directly or indirectly from claim 1, are submitted as patentable for at least the same reasons as claim 1.

Claims 6-7, 9, 11-12, and 19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over San Filippo in view of Blouin et al. and further in view of U.S. Patent No. 6,404,744 (Saito).

The Saito patent is directed to a method for designing a communication network. In rejecting claim 6, the Examiner refers to an optimization step in the flowchart of Fig. 2 of Saito. There is no teaching of correcting input data if inconsistencies are detected. With regard to claims 7 and 9, the Examiner refers to the Background in Saito, which merely describes an optimization section that solves a linear programming problem generated by an optimization reference generator to determine the capacities of the paths and links. There is no teaching of solving a linear programming problem with a linear objective function to minimize data traffic reconciliation (error correction), as set forth in claim 7, or traffic values in a modified scenario expressed as a linear function of node-to-node flows in an initial scenario, as set forth in claim 9.

Claims 15 and 25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over San Filippo, Blouin, U.S. Patent No. 7,302,482 (Rodosek et al.) and PCT WO 96/19905 (Peterson et al.).

The American Inventors Protection Act (AIPA) amended 35 U.S.C. § 103(c) to exclude subject matter developed by another person which qualifies as prior art under Section 102(e), provided that this subject matter and the claimed invention were commonly owned at the time the claimed invention was made. This amendment to Section 103(c) applies to patent applications filed on or after November 29, 1999. (American Inventors Protection Act of 1999, Pub. L. No. 106-113, Sec. 4807(b)). The subject patent application was filed after November 29, 1999 and the invention was commonly owned with the subject matter of the Rodosek et al. patent at the time the invention was made.

Accordingly, the rejection of claims 15 and 25 in view of Rodosek et al. should be withdrawn.

The other references cited, including U.S. Patent Nos. 6,594,268 (Aukia et al.), 7,206,289 (Hamada), 7,111,074 (Basturk), 5,043,027 (Takase et al.), and 7,047,309 (Baumann et al.), and U.S. Patent Application Publication Nos. 2003/0118027 (Lee et al.) and 2002/0167898 (Thang et al.), do not overcome the deficiencies of the primary references.

For the foregoing reasons, Applicants believe that all of the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned at (408) 399-5608.

Respectfully submitted,

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